5964

# 5964

## MEDIUM-MU TWIN TRIODE

FOR "ON-OFF" CONTROL APPLICATIONS INVOLVING
LONG PERIODS OF OPERATION UNDER CUTOFF CONDITIONS

### GENERAL DATA

**Electrical:**

| | | |
|---|---|---|
| Heater, for Unipotential Cathode: | | |
| Voltage | 6.3 ± 10% | ac or dc volts |
| Current | 0.45 | amp |
| Microphonism | | Not Tested |
| Direct Interelectrode Capacitances (Approx.):° | | |
| Each Unit: | | |
| Grid to Plate | 1.3 | μμf |
| Grid to Cathode and Heater | 2.1 | μμf |
| Plate to Cathode and Heater | 0.4 | μμf |
| Grid of Unit No.1 to Grid of Unit No.2 | 0.4 max. | μμf |

° with no external shielding.

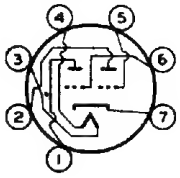
**Characteristics, Class A Amplifier (Each Unit, with both units operating):**

| | | |
|---|---|---|
| Plate Voltage | 100 | volts |
| Cathode-Bias Resistor● | 50 | ohms |
| Amplification Factor | 39 | |
| Plate Resistance | 6500 | ohms |
| Transconductance | 6000 | μmhos |
| Plate Current | 9.5 | ma |

**Mechanical:**

| | |
|---|---|
| Mounting Position | Any |
| Maximum Overall Length | 2-1/8" |
| Maximum Seated Length | 1-7/8" |
| Length, Base Seat to Bulb Top (Excluding tip) | 1-1/2" ± 3/32" |
| Maximum Diameter | 3/4" |
| Bulb | T-5-1/2 |
| Base | Small-Button Miniature 7-Pin |
| Basing Designation for BOTTOM VIEW | 7BF |

Pin 1 - Plate of Triode No.2
Pin 2 - Plate of Triode No.1
Pin 3 - Heater
Pin 4 - Heater
Pin 5 - Grid of Triode No.1
Pin 6 - Grid of Triode No.2
Pin 7 - Cathode




### FREQUENCY DIVIDER IN COMPUTER SERVICE & "ON-OFF" CONTROL SERVICE

*Values are for each unit*

**Maximum Ratings, *Absolute Values*:**

| | | |
|---|---|---|
| PLATE VOLTAGE | 250 max. | volts |

● Common to both units.

5964

# 5964

## MEDIUM-MU TWIN TRIODE

| | | |
|---|---|---|
| GRID VOLTAGE: | | |
| Negative bias value | 100 max. | volts |
| Positive bias value | 0 max. | volts |
| Peak negative value | 200 max. | volts |
| PLATE DISSIPATION | 1.5 max. | watts |
| GRID INPUT | 0.1 max. | watt |
| DC CATHODE CURRENT* | 15 max. | ma |
| PEAK CATHODE CURRENT* | 75 max. | ma |
| PEAK HEATER-CATHODE VOLTAGE: | | |
| Heater negative with respect to cathode | 90 max. | volts |
| Heater positive with respect to cathode | 90 max. | volts |
| BULB TEMPERATURE (At hottest point on bulb surface) | 150 max. | °C |

**Typical Operation as Frequency Halfer (Each Unit):**

| | *Cutoff Condition* | *Zero-Bias Condition* | |
|---|---|---|---|
| Plate-Supply Voltage | 150 | 150 | volts |
| Plate-Circuit Resistance | 20000 | 20000 | ohms |
| Grid-Supply Voltage | −10 | 0 | volts |
| Grid-Circuit Resistance | 47000 | 47000 | ohms |
| Plate Current | 0 | 5 | ma |

**Maximum Circuit Values:**

| | | |
|---|---|---|
| Grid-Circuit Resistance: | | |
| For fixed-bias operation | 0.5 max. | megohm |
| For cathode-bias operation | 1.0 max. | megohm |

**RANGE VALUES FOR EQUIPMENT DESIGN**

| *Cutoff Condition* | *Note* | *Min.* | *Max.* | |
|---|---|---|---|---|
| Plate Current (Each Unit) | 1 | – | 0.2 | ma |
| Difference in Plate Current Between Units | – | – | 0.2 | ma |
| *Zero-Bias Condition* | | | | |
| Plate Current (Each Unit) | 2 | 4.3 | 5.7 | ma |
| Difference in Plate Current Between Units | – | – | 1.4 | ma |

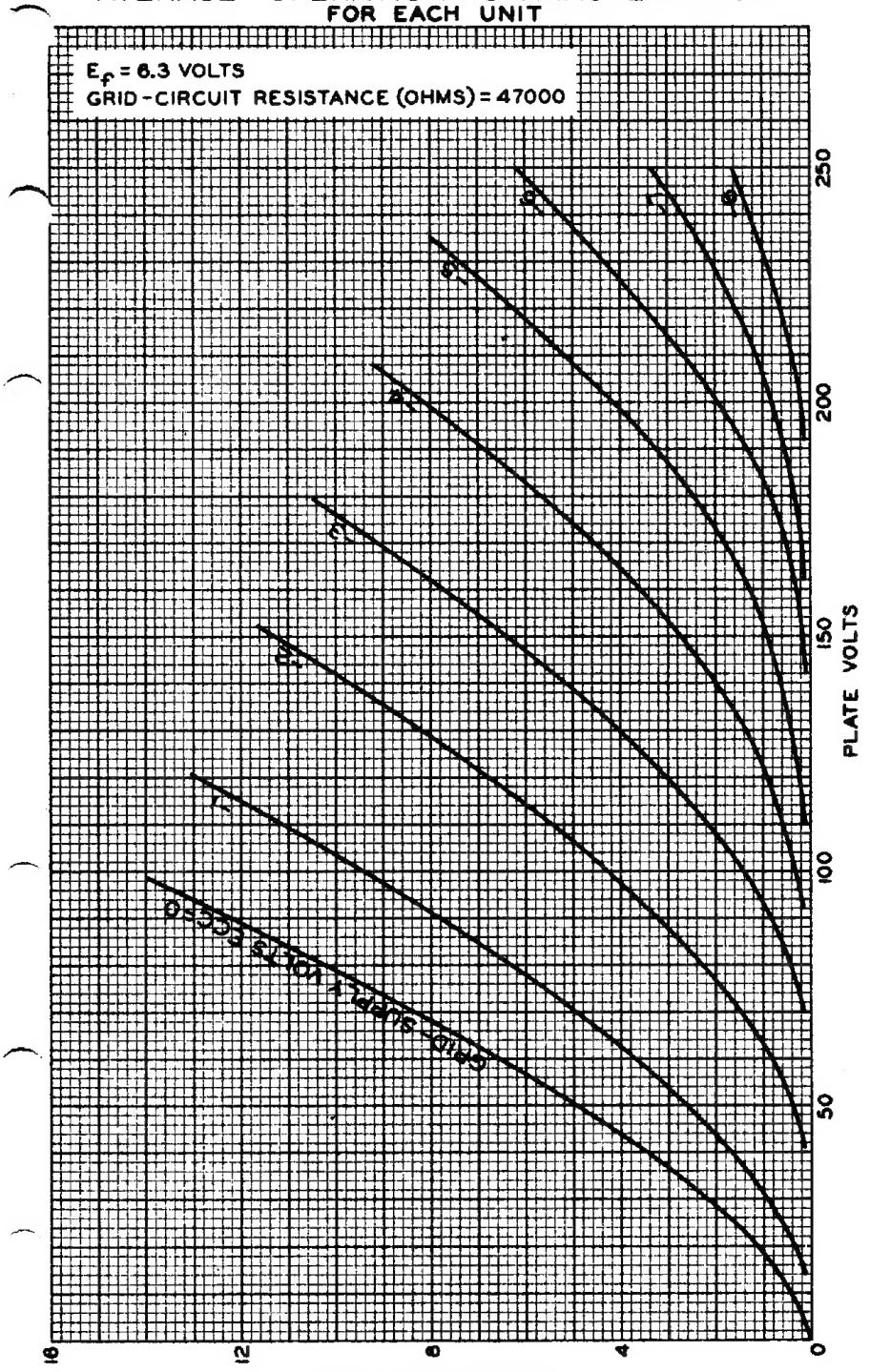
Note 1: For conditions with 6.3 volts on heater, plate-supply volts = 150, plate-circuit resistance (ohms) = 20000, grid-supply volts = −10, and grid-circuit resistance (ohms) = 47000.

Note 2: Conditions are same as for Note 1 except that grid-supply volts = 0.

* With both units operating, the dc cathode current should not exceed 30 milliamperes, and the peak cathode current should not exceed 150 milliamperes.

5964

# AVERAGE OPERATION CHARACTERISTICS
FOR EACH UNIT




MAY 31, 1950 | TUBE DEPARTMENT | 92CM-7495

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY